Model: **TZT9/14/BB**

Axis IP Camera (H.264) Settings

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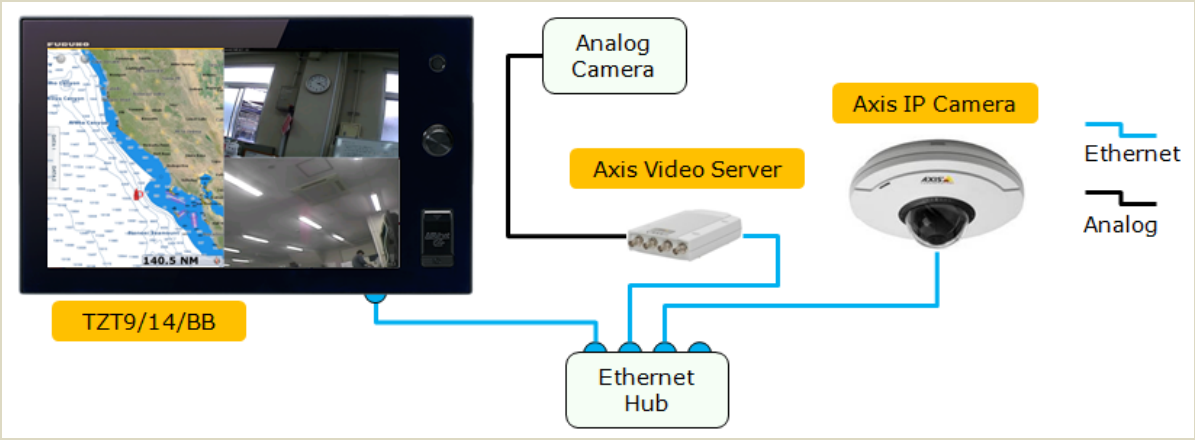
1. Introduction – v3.01 with H.264

In addition to MPEG-4, the TZtouch v3.01 software is also compatible with H.264 format, which offers a wider selection of cameras from Axis Communications AB. Native H.264 formatted images occupy a great amount of bandwidth for the TZT9/14/BB Ethernet network. In addition to conventional settings, such as IP address, be sure to set the resolution to 800 x 600 (4:3) pixels or lower, and compression level to "30". This document describes the procedures for setting up Axis IP cameras and video servers using the H.264 format.

Note: MPEG-4 compatible Axis cameras, which were compatible with TZtouch v2.01 software (or earlier), continue to work with v3.01. For MPEG-4 cameras, you should continue following conventional set-up procedures.



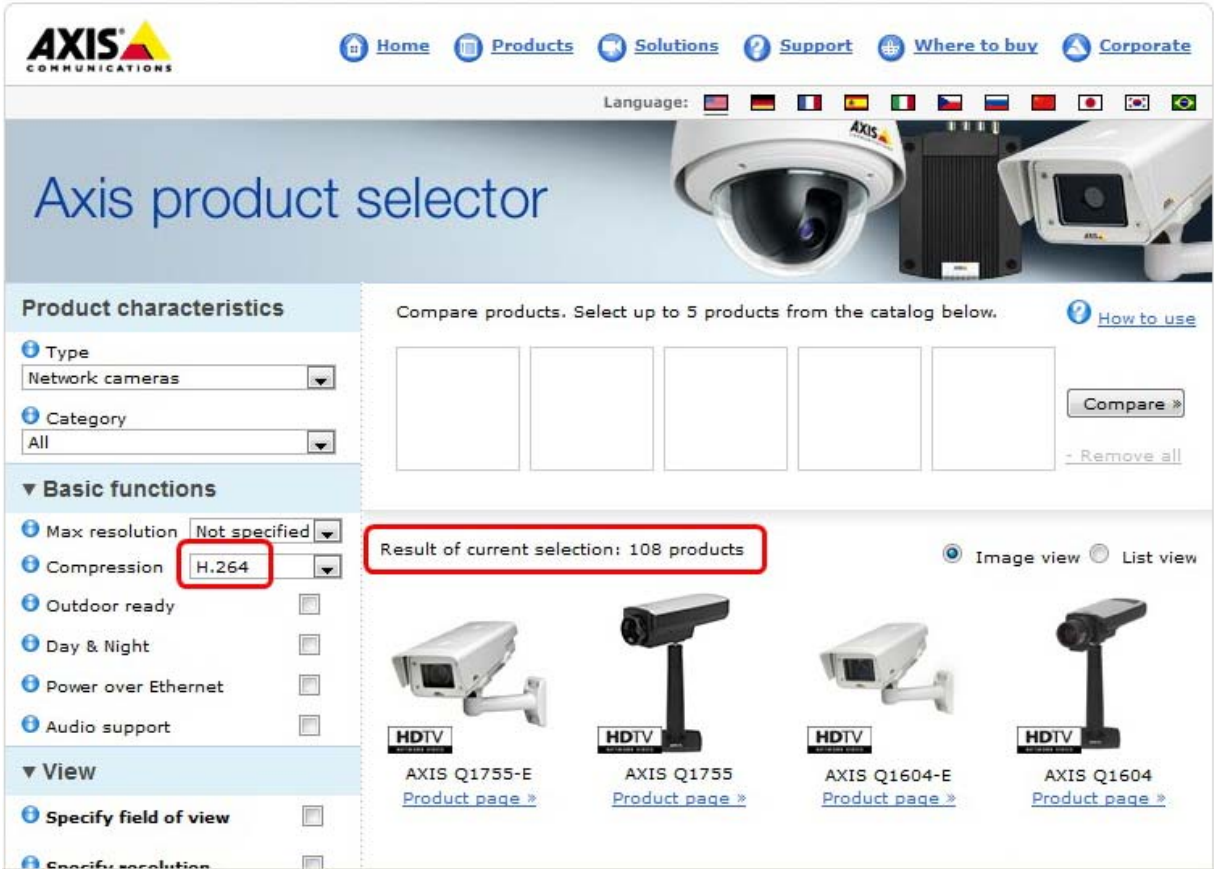
2. Overview

2-1. Summary – Setup Procedure

In order to view and control Axis IP cameras from the TZT9/14/BB, it is necessary to assign an IP address to each Axis IP camera. This procedure requires a Windows PC connected via Ethernet to the Axis IP camera(s). Pre-wiring and installing all cameras on the vessel first is recommended. This will allow you to configure all of the Axis IP cameras at the same time by networking the cameras to the PC through a hub. It is necessary to set up the IP address of the PC and use the AXIS IP Utility program, which is included with the camera, to configure the camera's IP address. See **Section 3** for PC setup before connecting it to an IP camera or video server. See **Section 4** for further settings on IP cameras and **Section 5** for video servers.

2-2. Latest Axis Cameras Compatible with H.264 Format

To find the latest Axis camera models using the H.264 format, visit the Axis product selector on their website: <http://www.axis.com/products/video/selector/index.php>.



2-3. Tested Axis Video Servers at FEC

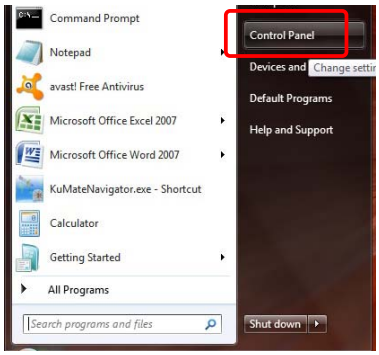
The following Axis video servers were used for tests at Furuno Electric Company, in Japan.

	M7014 http://www.axis.com/products/cam_m7014/index.htm Analog Input: Four (4) channels Ethernet Output: One (1) channel
	P7214 http://www.axis.com/products/cam_p7214/index.htm Analog Input: Four (4) channels Ethernet Output: One (1) channel

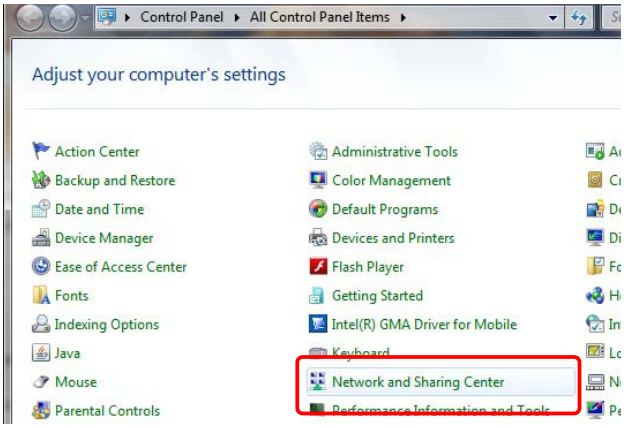
3. Setting up a PC

This section describes how to assign a dedicated IP address to a PC. In this example, a Windows 7 PC is used.

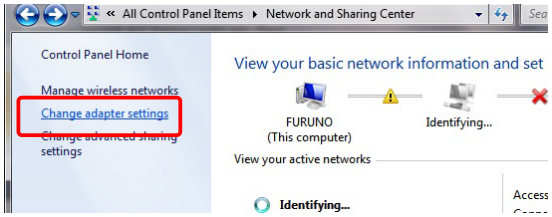
1. Access [**Start**] – [**Control Panel**].



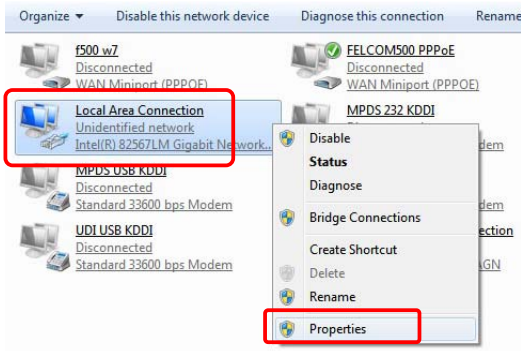
2. Open [**Network and Sharing Center**].



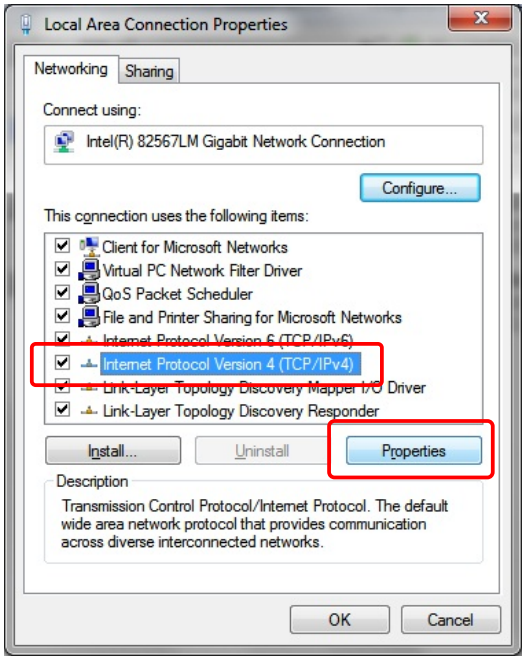
3. Open [**Change adapter settings**].



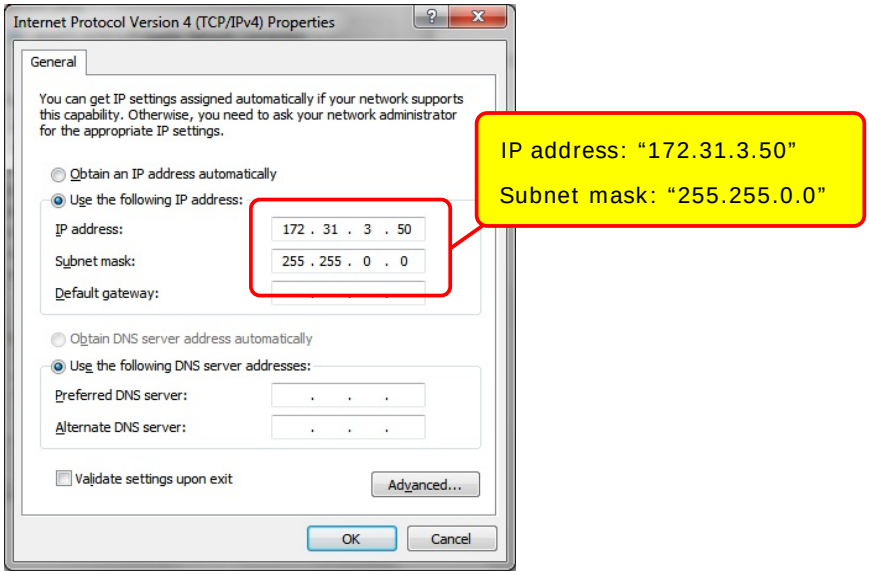
4. Right-click on [**Local Area Connection**] and select [**Properties**].



5. Select [**Internet Protocol Version 4 (TCP/IPv4)**] and click on [**Properties**].

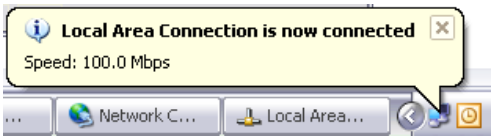


6. Fill the IP fields as shown below.


Internet Protocol Version 4 (TCP/IPv4) Properties
General
You can get IP settings assigned automatically if your network supports this capability. Otherwise, you need to ask your network administrator for the appropriate IP settings.
Obtain an IP address automatically
Use the following IP address:
IP address: 172 . 31 . 3 . 50
Subnet mask: 255 . 255 . 0 . 0
Default gateway:
Obtain DNS server address automatically
Use the following DNS server addresses:
Preferred DNS server:
Alternate DNS server:
Validate settings upon exit
Advanced...
OK
Cancel
IP address: “172.31.3.50”
Subnet mask: “255.255.0.0”

7. Click on [**OK**] to confirm and close two windows on Step 6 and 5.

Note: It can take up to 20 seconds for the new IP to be recognized. A popup window on the bottom right corner should show when the IP is correctly set. Turn OFF any Firewall that could prevent data to be exchanged between NavNet and the PC. You may also have to restart your computer.



4. Setting up Axis IP Camera

4-1. Setting up IP Address of Axis IP Cameras

To work with NavNet TZtouch, Axis IP cameras need to be set up with specific IP Addresses. Up to four (4) IP cameras can be connected to a TZtouch network.

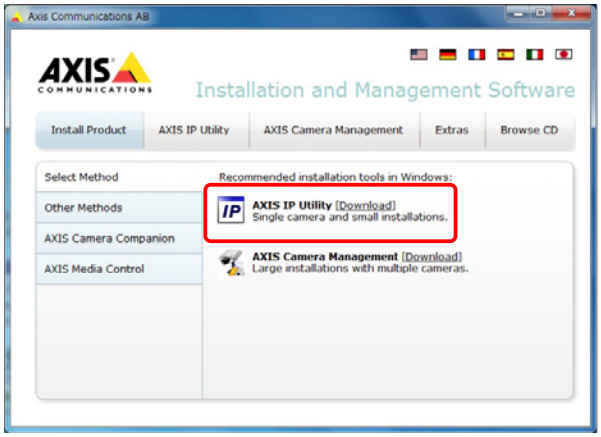
Axis IP Camera No. 1	Axis IP Camera No. 2	Axis IP Camera No. 3	Axis IP Camera No. 4
172.031.200.00**3**	172.031.200.00**4**	172.031.200.00**5**	172.031.200.00**6**

In this example, two (2) sets of Axis M1011 are used.

1. Load the Axis CD “Network video products,” which is included with the Axis camera. The Auto-run software should appear (If the auto-run is not working on your computer, browse the CD and double click on [**Setup**])

2. Select [**Install Product**].

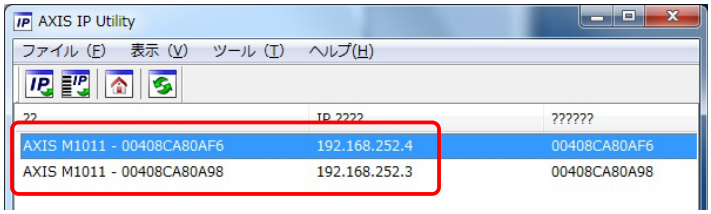
3. Click on [**AXIS IP Utility** [**Download**]] to download the AXIS IP Utility program.



4. Install the AXIS IP Utility program on your PC.

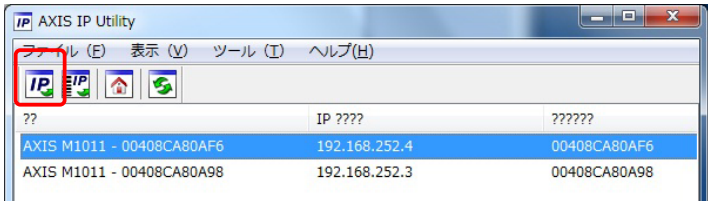
5. Double-click on [**AXIS IP Utility**] to open the program.

The following window will open, showing the detected cameras in the network.

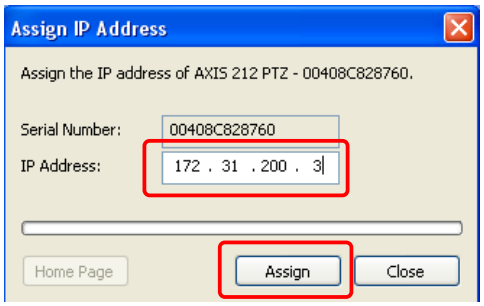


Note: If you use the same camera models in multiple locations, be sure to write down the serial numbers of each camera, along with their intended location, to help correctly assign the IP camera's name.

6. To change the IP address, select a camera and click on "assign new IP address to selected device" button.

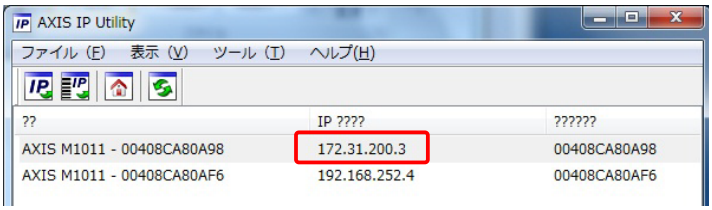


7. Enter the correct IP address and click on [**Assign**]. In this example, "172.31.200.**3**" will be assigned.

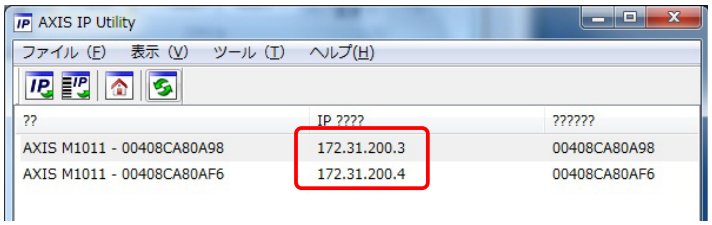


This process may take a few moments to complete.

8. Verify the IP address was successfully updated.



9. Repeat this process with all of the other camera(s).

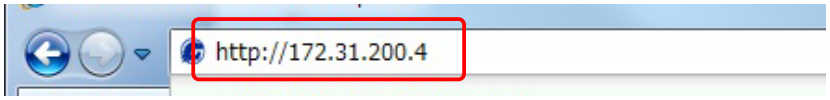


10. After the IP addresses have been changed, restart the cameras (power OFF/ON).

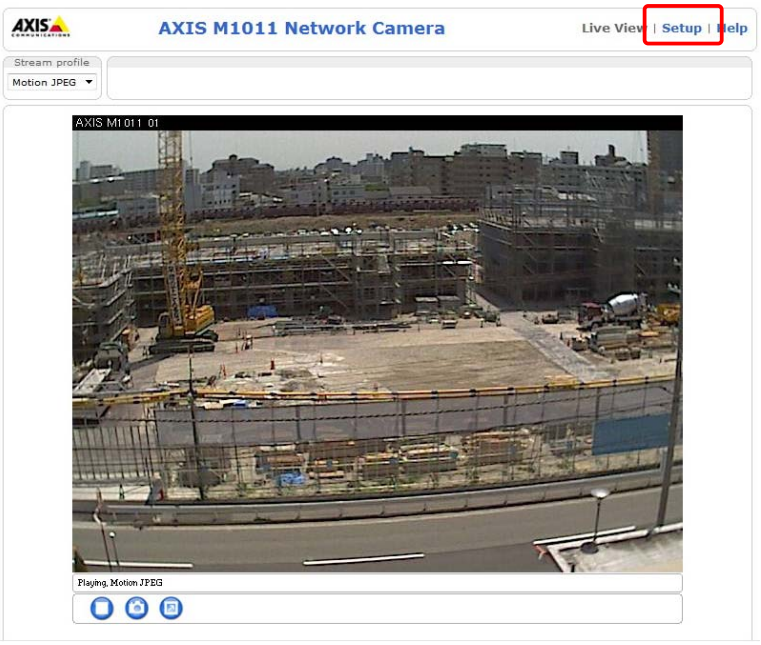
4-2. Configuring Axis IP Camera

Axis IP cameras must be configured using a Web browser.

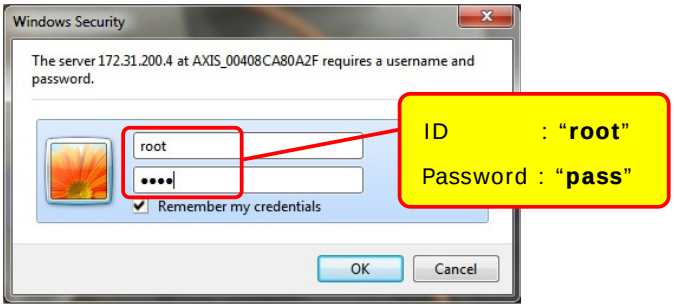
1. Enter the IP address of the camera in the browser's navigation bar. In this example, "http://172.31.200.4" is entered.



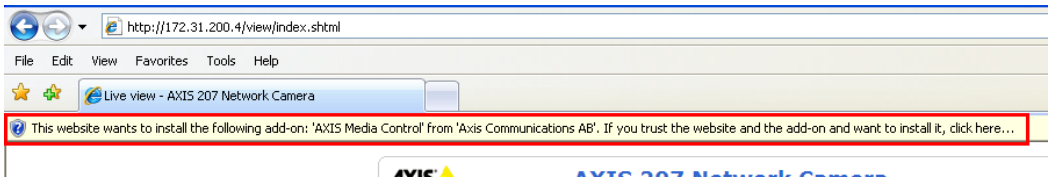
2. The camera configuration page will open. Click on [**Setup**] to access the configuration page.



3. When prompted, enter the ID and Password noted below, and then click on [**OK**].

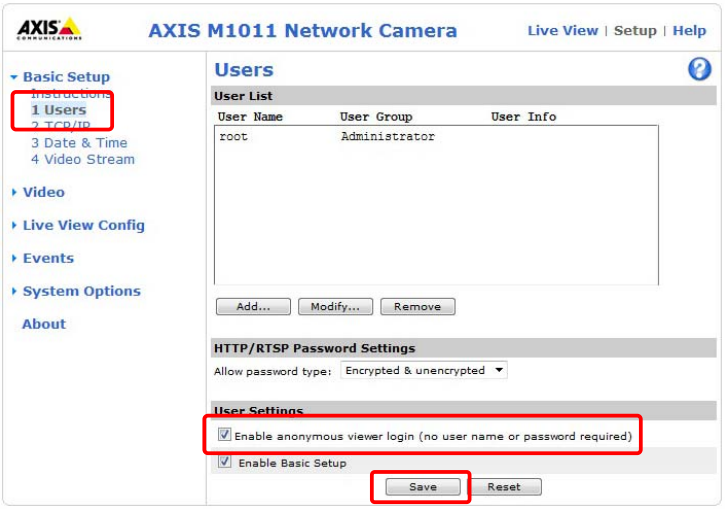


Note: When the webpage loads, pay attention to the top of the page to authorize the installation of the ActiveX®. Click on the yellow bar and choose "Install ActiveX".


http://172.31.200.4/view/index.shtml
File Edit View Favorites Tools Help
Live view - AXIS 207 Network Camera
This website wants to install the following add-on: 'AXIS Media Control' from 'Axis Communications AB'. If you trust the website and the add-on and want to install it, click here...

(ActiveX is a registered trademark of Microsoft Corporation)

4. After entering the ID and password noted above, the Setup page will open.
5. In [**Basic Setup**] – [**1 Users**], select [**Enable anonymous viewer login**] and click on [**Save**].



6. In [**Basic Setup**] – [**3 Date & Time**], select [**Synchronize with computer time**] and click on [**Save**].

7. In [**Basic Setup**] – [**4 Video Stream**] – [**Image**] tab, set [**Resolution**] to less than [**800x600 (4:3)**] and

[**Compression**] to [**30**] and click on [**Save**]. In this example, [**640x480 (4:3)**] is selected as the resolution, because this is the maximum resolution supported by the M1011.

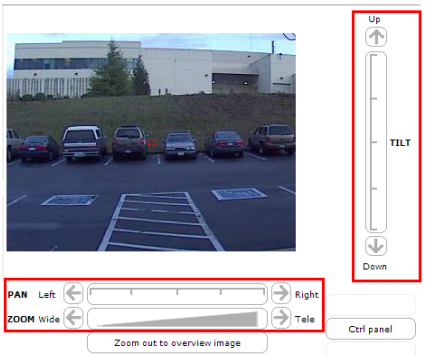
Tips: For cameras supporting a higher resolution than the M1011, such as the M5013, be sure to set the [**Resolution**] to [**800x600 (4:3)**].

8. In [**Basic Setup**] – [**4 Video Stream**] – [**H.264**] or [**MPEG-4 & H.264**] tab, set as follows.

Optional Settings

(1) PTZ

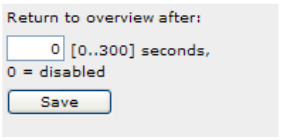
When using a PTZ (moving) camera, you can set up the default "Home" position. In [**PTZ configuration**] – [**Preset Positions**], adjust the view of the default camera position using the control.



Note:

It is recommended to zoom in on the image to have a better “Home” preset. When the view is correctly set up, type “Home” for the Current position and select [**Use current position as Home**]. Click on [**Add**] to validate.

If you do not need the camera to return to the “Home” position automatically after 30 sec, just put [**0**] and validate.



(2) Aspect Ratio Correction

Some Axis IP camera models have a setting option of aspect ratio correction in [**Basic Setup**] – [**4 Video Stream**]. Make sure to select [**Aspect ratio correction**].

5. Setting up Axis Video Server

5-1. Setting up IP Address of Axis Video Servers

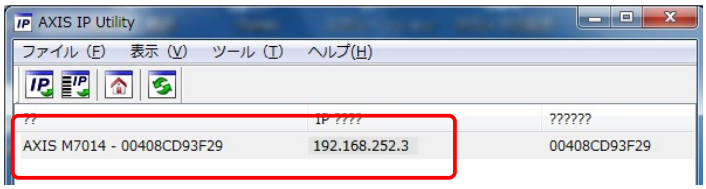
To work with NavNet TZtouch, an Axis video server must be set up with specific IP Addresses. Up to two (2) video servers can be connected to the TZtouch network. In this example, the Axis M7014 is used.

Axis Video Server No. 1	Axis Video Server No. 2
172.031.200.00**7**	172.031.200.00**8**

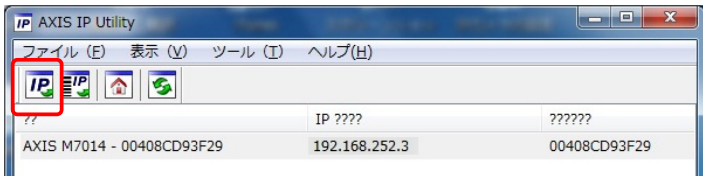
Follow Steps 1 through 4 in **Section 4-1**, then continue on to step 5 below.

5. Double-click on [**AXIS IP Utility**] to open the program.

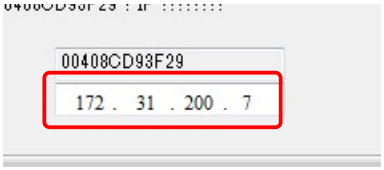
The following window will open, showing the detected cameras in the network.



6. To change the IP address, select a camera and click on “assign new IP address to selected device”.

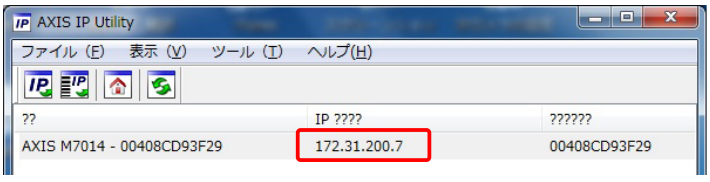


7. Enter the correct IP address and click on [**Assign**]. In this example, “172.31.200.**7**” will be assigned.



This process may take a few moments to complete.

8. Verify the IP address was successfully updated.



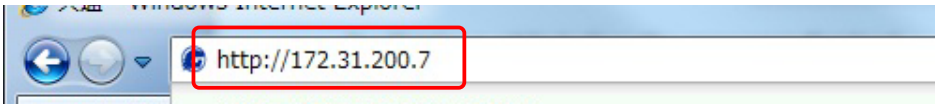
9. Repeat this process with the second video server, if available.

10. After the IP address is changed, restart the video server (power OFF/ON).

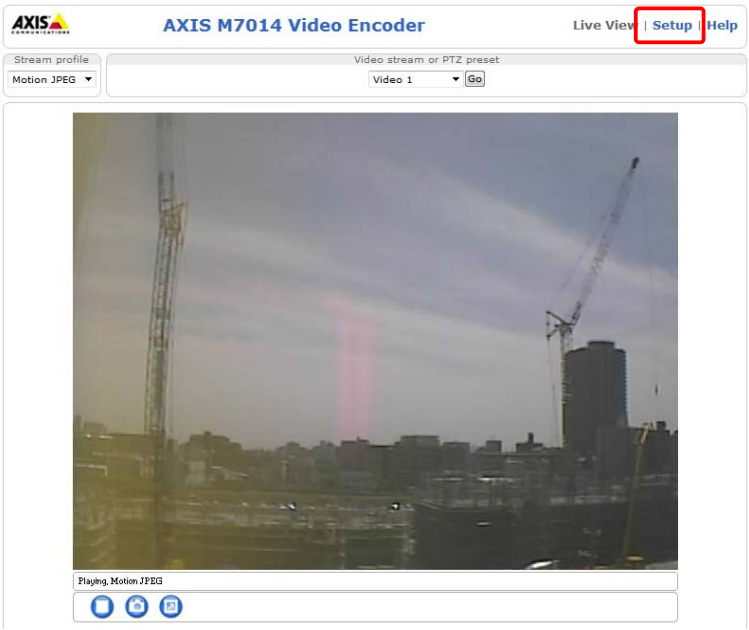
5-2. Configuring Axis Video Server

As with Axis IP cameras, Axis video servers must also be configured using a Web browser.

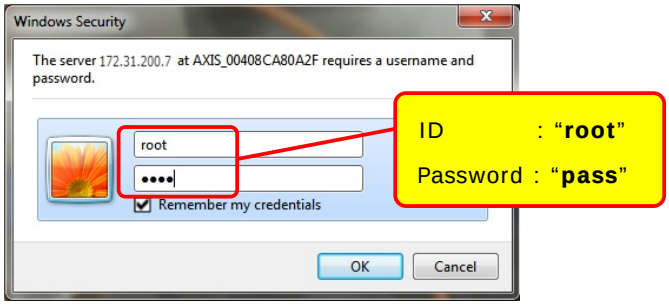
1. Enter the IP address of the video server. In this example, “http://172.31.200.7” is entered.



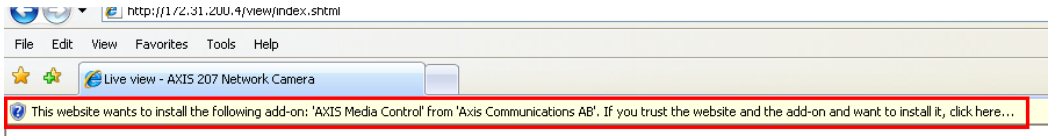
2. When the camera configuration page opens, click on [**Setup**] to access the configuration page.



3. When prompted, enter the ID and Password noted below, and then click on [**OK**].



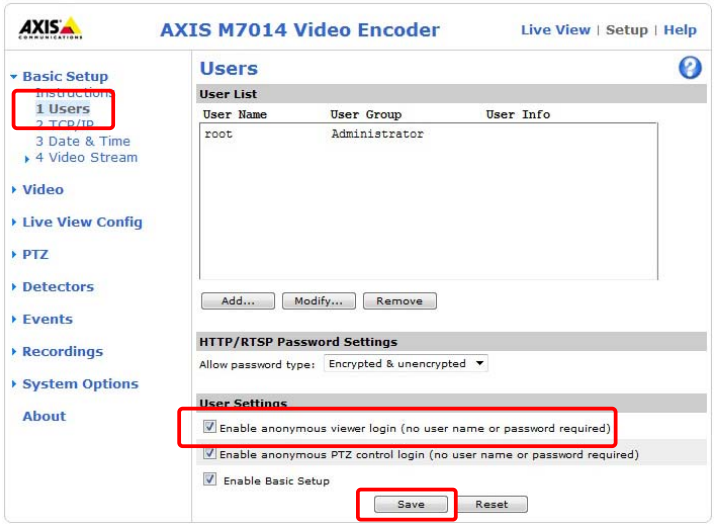
Note: When the webpage loads, pay attention to the top of the page to authorize the installation of the ActiveX. Click on the yellow bar and choose “Install ActiveX”.


File Edit View Favorites Tools Help
Live view - AXIS 207 Network Camera
This website wants to install the following add-on: 'AXIS Media Control' from 'Axis Communications AB'. If you trust the website and the add-on and want to install it, click here...

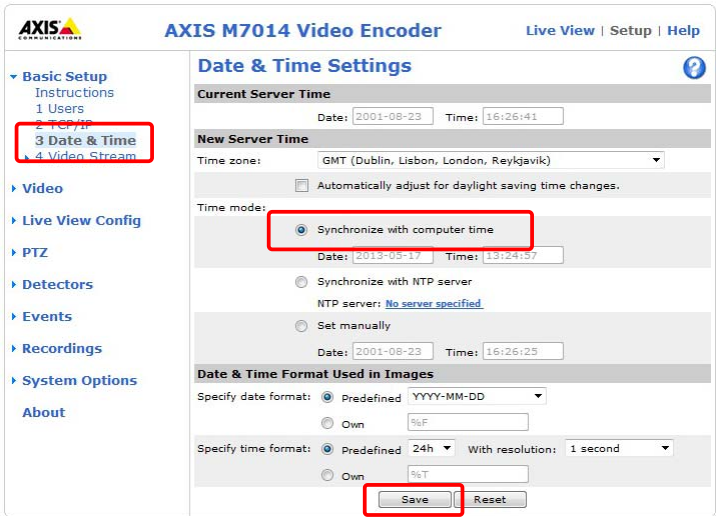
(ActiveX is a registered trademark of Microsoft Corporation)

4. After entering the ID and password noted above, the Setup page will open.

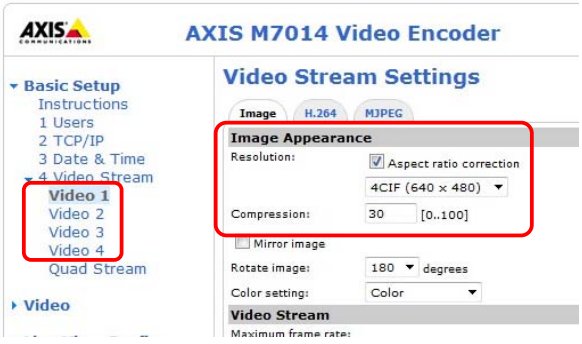
5. In [**Basic Setup**] – [**1 Users**], select [**Enable anonymous viewer login**] and click on [**Save**].

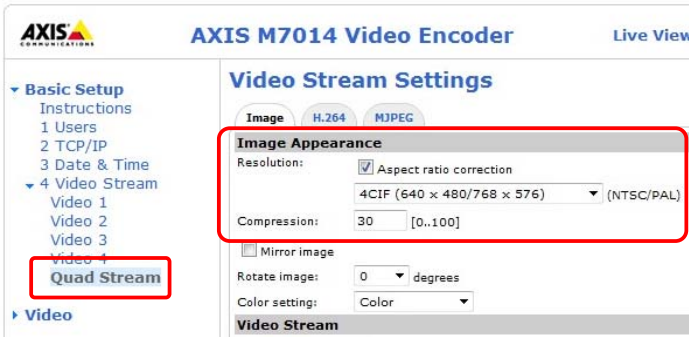


6. In [**Basic Setup**] – [**3 Date & Time**], select [**Synchronize with computer time**] and click on [**Save**].

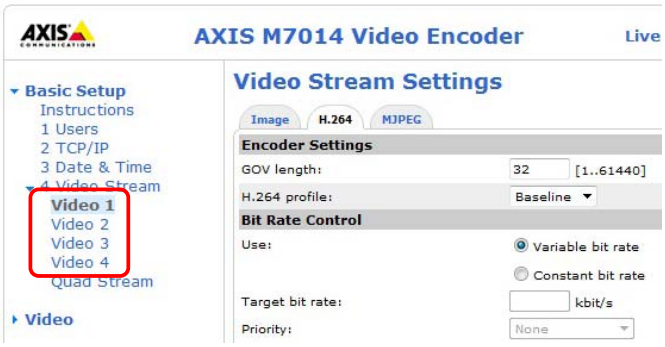


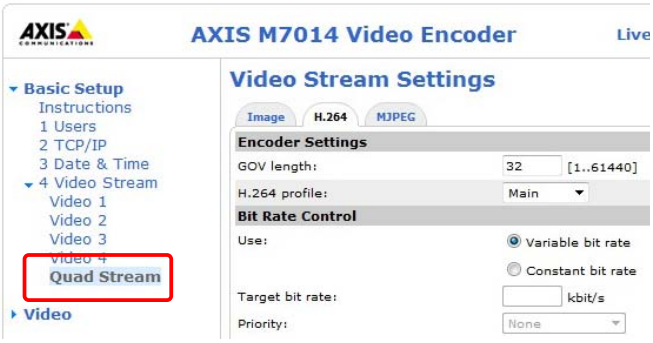
7. In [**Basic Setup**] – [**4 Video Stream**] – [**Video 1**] to [**Video 4**] and [**Quad Stream**] – [**Image**] tab, select [**Aspect ratio correction**], set [**Resolution**] to [**4CIF (640 x 480)**] and [**Compression**] to [**30**], and click on [**Save**].





8. In [**Basic Setup**] – [**4 Video Stream**] – [**Video 1**] to [**Video 4**] and [**Quad Stream**] – [**H.264**] tab, set as follows.





6. Showing Camera Images

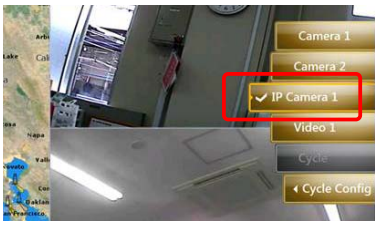
This section describes how to show camera images on the TZT9/14/BB.

6-1. Checking Axis IP Camera(s) in Menu

1. After the interconnection and setup of the IP cameras is complete, confirm they are detected in the TZtouch network by accessing [**Menu**] – [**Camera**] – [**IP Camera 1**] to [**IP Camera 4**].

Detected	Disconnected or Not Detected
When a camera is detected, the "✔" symbol will appear.	When a camera is disconnected or not detected, the "✖" symbol will appear.

2. Available IP camera sources are also displayed in the RotoKey™ menu.

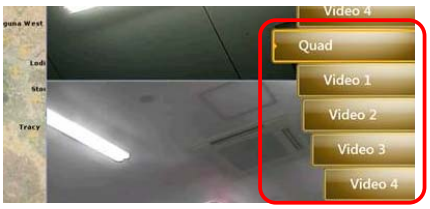


6-2. Checking Axis Video Server(s) in Menu

1. After the interconnection and setup of video servers is complete, confirm they are detected in the TZtouch network by accessing [**Menu**] – [**Camera**] – [**Axis Quad Server**] and [**Second Axis Quad Server**].

Detected	Disconnected or Not Detected
By default, [**Server**] is set to [**OFF**]. Turn it [**ON**] to show detailed settings. When a video server is detected, the "✅" symbol will appear. You can turn [**Quad Mode**] as well as [**Input 1**] to [**Input 4**] ON or OFF according to your preference. In this example, everything is [**ON**].	When a video server is disconnected or not detected, the "❌" symbol will appear.

2. Available video server sources are displayed in the RotoKey™ menu. In this example, [**Quad Mode**] and [**Input 1**] to [**Input 4**] are set to [**ON**] in the menu, thus all selections are shown.

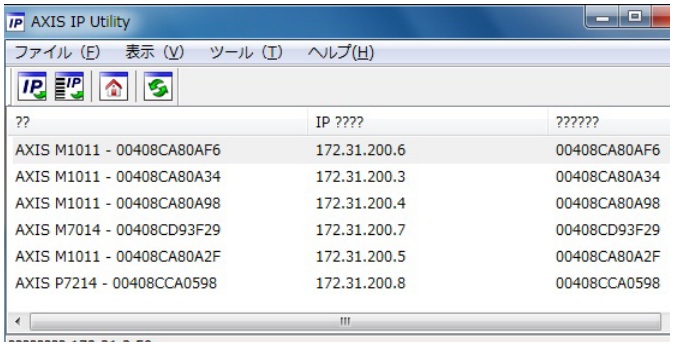


7. Tips – 4 x IP Cameras + 2 x Video Servers

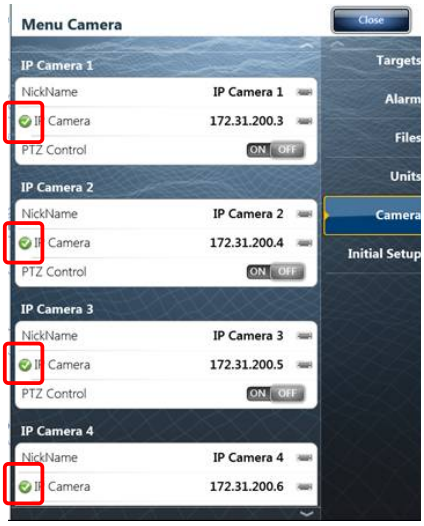
A maximum of four (4) sets of IP cameras and two (2) sets of video servers are available in one TZtouch network. In this example, the following items are configured and networked with the TZT14.

No	Items	Models	IP Addresses
1	IP Camera	M1011 (No. 1)	192.031.200.00**3**
2	IP Camera	M1011 (No. 2)	192.031.200.00**4**
3	IP Camera	M1011 (No. 3)	192.031.200.00**5**
4	IP Camera	M1011 (No. 4)	192.031.200.00**6**
5	Video Server	M7014	192.031.200.00**7**
6	Video Server	P7214	192.031.200.00**8**

1. All the IP cameras and video servers are assigned with dedicated IP addresses as shown in the AXIS IP Utility.



2. All the IP cameras and video servers are detected by the TZT14.

[Menu] – [Camera] – [IP Camera 1 to 4], [Axis Quad Server], and [Second Axis Quad Server]	[Menu] – [Initial Setup] – [Sensor List]
	

Note: A maximum of two (2) screens can be allocated to the Camera view in the 3-split screen mode on a TZtouch MFD. Select one of these sources in each screen.

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